

CLAIMS

1. (Currently Amended) A curable composition comprising a curable binder that is curable thermally and/or with actinic radiation, deagglomerated barium sulfate containing at least one dispersant and at least one crystallization inhibitor and had having a primary particle size of < 0.5 μm , wherein the crystallization inhibitor is selected from the group consisting of compounds of the general formula V or salts thereof

$\text{R}^2\text{-[A(O)OH]}_p$ (V)

in which the index and the variables have the following meanings:

R^2 is an organic radical containing hydrophobic and/or hydrophilic substructures;

A is C, P(OH), O-P(OH), S(O) or O-S(O); and

P is from 1 to 10 000.

2. (Canceled).

3. (Previously Presented) The curable composition as claimed in claim 2, wherein in the crystallization inhibitor (V), the organic radical R^2 is a low molecular mass, oligomeric or polymeric, carbon chain that is optionally branched and/or cyclic, said carbon chain optionally containing heteroatoms selected from the group consisting of oxygen, phosphorus, nitrogen and sulfur heteroatoms, and/or substituted by radicals attached via oxygen, nitrogen, phosphorus or sulfur to the radical R^2 .

4. (Presently Amended) The curable composition as claimed in claim 1, wherein the crystallization inhibitor is a carboxylic acid having at least two carboxylate groups and at least one hydroxyl group; an alkyl sulfate; and alkylbenzenesulfonate; a polyacrylic acid; or an optionally hydroxy-substituted diphosphinic acid.

5. (Previously Presented) The curable composition as claimed in claim 1, wherein the dispersant imparts to the barium sulfate particles of a surface which inhibits agglomeration and/or prevents reagglomeration by at least one of electrostatically or osmotically.

6. (Original) The curable composition as claimed in claim 5, wherein the dispersant is a phosphoric diester including as substructures a polyether group and a C₆-C₁₀ alkenyl group.
7. (Previously Presented) The curable composition as claimed in claim 5, wherein the dispersant contains reactive groups for covalent attachment.
8. (Previously Presented) The curable composition as claimed in claim 7, wherein the reactive groups are at least one of hydroxyl groups or amino groups.
9. (Original) The curable composition as claimed in claim 5, wherein the dispersant is a polyetherpolycarboxylate substituted terminally on the polyether groups by hydroxyl groups.
10. (Previously Presented) The curable composition as claimed in claim 1, wherein the deagglomerated barium sulfate is used in the form of one of a suspension in water, an organic liquid, a mixture of water and organic liquid, or a suspension in a polymeric premix.
11. (Previously Presented) The curable composition as claimed in claim 1, wherein the deagglomerated barium sulfate is used as a dry, redispersible powder obtained by drying the deagglomerated barium sulfate.
12. (Currently Amended) A polymeric premix for curable compositions, comprising deagglomerated barium sulfate and a curable binder that is curable thermally and/or with actinic radiation as claimed in claim 1.
- 13 (Original) The curable composition as claimed in claim 10, wherein the deagglomerated barium sulfate used in the preparation of the curable composition is in suspension in an aqueous phase.
14. (Original) The curable composition as claimed in claim 13, wherein the suspension of the deagglomerated barium sulfate has a solids content of from 0.1 to 30% by weight.
15. (Previously Presented) The curable composition as claimed in claim 13, wherein the suspension has a pH>7.

16. (Previously Presented) The curable composition as claimed in claim 1, wherein the deagglomerated barium sulfate is a catalyst for curing the curable composition.
17. (Previously Presented) The curable composition as claimed in claim 1, further comprising binders which contain at least one epoxide group (a1).
18. (Previously Presented) The curable composition as claimed in claim 17, wherein the binders are at least one of oligomers or polymers (A).
19. (Previously Presented) The curable composition as claimed in claim 17, wherein the oligomers or polymers (A) are at least one of hydrolysates prepared by hydrolyzing or condensates prepared by condensing, at least one oligomer or polymer (A) containing at least one epoxide group (a1) and at least one hydrolyzable silane group (a2).
20. (Original) The curable composition as claimed in claim 19, wherein the oligomers and polymers (A) containing at least one epoxide group (a1) and at least one hydrolyzable silane group (a2) are selected from the group of the addition copolymers of olefinically unsaturated monomers.
21. (Original) The curable composition as claimed in claim 20, wherein the oligomers and polymers (A) containing at least one epoxide group (a1) and at least one hydrolyzable silane group (a2) are addition (meth)acrylate copolymers.
22. (Previously Presented) The curable composition as claimed in claim 19, wherein the molar ratio of epoxide groups (a1) to hydrolyzable silane groups (a2) in an oligomer or polymer (A) is from 1:5:1 to 1:15.
23. (Previously Presented) The curable composition as claimed in claim 19, wherein the oligomer and the polymer (A) are prepared by copolymerizing at least one monomer (a1) containing at least one epoxide group (a1) with at least one monomer (a2) containing at least one hydrolyzable silane group (a2).
24. (Original) The curable composition as claimed in claim 23, wherein the monomers (a1) and (a2) are copolymerizable with at least one further monomer (a3) different from (a1) and (a2).

25. (Previously Presented) The curable composition as claimed in claim 23 wherein the monomers (a1), (a2) and (a3) contain at least one olefinically unsaturated group.
26. (Previously Presented) The curable composition as claimed in claim 25, wherein the olefinically unsaturated groups are methacrylate and/or acrylate groups.
27. (Previously Presented) The curable composition as claimed in claims 23, wherein the molar ratio of monomer (a1) to monomer (a2) is from 1.5:1 to 1:1.5.
28. (Previously Presented) The curable composition as claimed in claim 19, wherein the oligomers and polymers (A) containing at least one epoxide group (a1) and at least one hydrolyzable silane group (a2) are hydrolyzable and/or condensable at a pH<7.
29. (Original) The curable composition as claimed in claim 28, wherein the hydrolysis and/or condensation can be conducted in the presence of an organic acid.
30. (Previously Presented) The curable composition as claimed in claim 19, wherein the hydrolysis and/or condensation is conducted at from -10°C to +80°C.
31. (Previously Presented) The curable composition as claimed in claim 1, wherein the deagglomerated barium sulfate is additionally modified with at least one modifier.
32. (Previously Presented) The curable composition as claimed in claim 31, wherein the modifier is at least one of acetic acid or propionic acid.
- 33-34.(Cancelled)
35. (Previously Presented) A material comprising the curable composition as claimed in claim 1, wherein said material is selected from the group consisting of a coating material, an adhesive, a sealant, a starting material for moldings and a starting material for self-supporting sheets.
36. (Previously Presented) A curable composition as claimed in claim 1 comprising a composition for shielding substrates from high-energy radiation.

37. (New) The curable composition as claimed in claim 1, wherein the crystallization inhibitor is a carboxylic acid having at least two carboxylate groups and at least one hydroxyl group.
38. (New) The curable composition as claimed in claim 37, wherein the crystallization inhibitor comprises citric acid.
39. (New) A curable composition comprising a curable binder that is curable thermally and/or with actinic radiation, deagglomerated barium sulfate containing at least one dispersant and at least one crystallization inhibitor and having a primary particle size of < 0.5 μm , wherein the crystallization inhibitor is a carboxylic acid having at least two carboxylate groups and at least one hydroxyl group, the dispersant is not the same as the crystallization inhibitor and contains at least one of hydroxyl groups or amino groups, and wherein the curable binder contains at least one epoxide group.